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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,694	03/05/2007	Jouni Matula	JHN-5373-5	3738
23117 7590 08/27/2010 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER JANCA, ANDREW JOSEPH				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,694

Applicant(s)

MATULA, JOUNI

Examiner

Andrew Janca

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-54 is/are pending in the application.
- 4a) Of the above claim(s) 25-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group II, claims 35-54 in the reply filed on 7/29/10 is acknowledged. Claims 25-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 36-37, 39-44, and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 36 recites that the chemical duct "further" comprise a thin pipe chemical feed duct. As it appears from the disclosure that the chemical duct is the thin pipe chemical feed duct 162 (figure 3), the language "further" is confusing since it seems to imply that the chemical feed duct contain another thin pipe duct inside of it.

6. Claims 39-44 and 50 are particularly confusing because of the proliferation of terms identifying parts which were not previously used in the antecedent claims or the specification, or (worse) which could refer to any one of several antecedently recited parts. These terms include "the mixing liquid feed device", "the liquid flow duct", "the feed liquid flow", "the mixing liquid feed duct", "the chemical feed duct", "the liquid duct", and "the flow duct".
7. Claims 39 and 40 recite "the mixing liquid feed device". There is insufficient antecedent basis for this limitation in the claims. Further, it is unclear to which part in the disclosure or the antecedent claims "the mixing liquid feed device" should correspond.
8. Claims 39 and 41 recite "the liquid flow duct". There is insufficient antecedent basis for this limitation in the claims. Further, it is unclear to which part in the disclosure or the antecedent claims "the liquid flow duct" should correspond.
9. Claim 40 recites "the feed liquid flow". There is insufficient antecedent basis for this limitation in the claims.
10. Claims 41, 42, 43, and 44 recite "the mixing liquid feed duct". There is insufficient antecedent basis for this limitation in the claims. Further, it is unclear to which part in the disclosure or the antecedent claims "the mixing liquid feed duct" should correspond.
11. Claim 43 recites "the chemical feed duct". There is insufficient antecedent basis for this limitation in the claims. Further, it is unclear to which part in the disclosure or the antecedent claims "the chemical feed duct" should correspond.

12. Claim 50 recites "the liquid duct" and "the feed duct". There is insufficient antecedent basis for these limitation in the claim. Further, it is unclear to which parts in the disclosure or the antecedent claims "the liquid duct" and "the feed duct" should correspond.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 35-54 are rejected under 35 U.S.C. 102(b) as being anticipated by US 945,143 to Szamek.

15. With regard to claim 35, Szamek teaches a feeding device which may be used for feeding chemical into a liquid flow comprising: a nozzle casing, one of (7, 22, 7-22), a feeding liquid duct, one of (7, 41), and a mixing apparatus, one of (10, 11) in the nozzle casing and including a mixing space (10, 11) isolated from the feeding liquid duct, a chemical duct 34 to pass the chemical to the mixing space, and a mixing liquid duct, one of (3, 4-7) to pass a mixing liquid to the mixing space, the mixing space having an outlet of a mixture of chemical and mixing liquid feeding said solution to the feeding liquid duct (figure 1). It has been held that the manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art

apparatus teaches all of the structural limitations of the claim. See *Ex Parte Masham*, 2 USPQ2d 1647 (BPAI 1987).

16. The additional elements of claim 36, including that the chemical duct further comprises a thin pipe chemical feed duct 34 for feeding small chemical amounts to the mixing space, are taught by Szamek (figure 1).

17. The additional elements of claim 37, further including the chemical duct includes a chemical feeding duct 34 extending to the isolated mixing space 10 centrally inside the feeding liquid duct 7, are taught by Szamek (figure 1).

18. The additional elements of claim 38, including that the mixing liquid duct comprises a cylindrical mixing liquid feed duct 3 for feeding mixing liquid to the mixing space, are taught by Szamek (figure 1).

19. The additional elements of claim 39, including that the isolated mixing space 10 is provided at an end of the mixing liquid feed device facing a liquid flow duct 33, are taught by Szamek (figure 1).

20. The additional elements of claim 40, further including a plurality of openings, the openings of pipes 4 and 33, provided in a wall of the mixing liquid feed device 7 in [fluid] connection with the isolated mixing space 10 for feeding the mixture of chemical and mixing liquid to the feed liquid flow, are taught by Szamek (figure 1).

21. The additional elements of claim 41, including that a liquid flow duct 7 include at least a feed opening into which also a mixing liquid feed duct 4 extends, are taught by Szamek (figure 1).

22. The additional elements of claim 42, including that a mixing liquid feed duct 4 is at least partly located inside the nozzle casing 7 feeding the feed liquid, are taught by Szamek (figure 1).

23. The additional elements of claim 43, further including a securing device, the unnumbered joint by which 34 enters 3, that secures a chemical feed duct 34 to a mixing liquid feed duct 3, are taught by Szamek (figure 1).

24. The additional elements of claim 44, further including a securing device, screw threading, that secures a mixing liquid feed duct 12 to the nozzle casing 22 so that a position of the mixing liquid feed duct can be adjusted, are taught by Szamek (figure 1; 2:51-57).

25. The additional elements of claim 45, further including a mounting 9 for securing the nozzle casing 7 to the mixing liquid duct 3, are taught by Szamek (figure 1).

26. The additional elements of claim 46, further including a mount, the screw threading of 12, securing the mixing apparatus 11 to the nozzle casing 22 wherein the mount is adjustable, are taught by Szamek (figure 1; 2:51-57).

27. The additional elements of claim 47, further including a conical converging portion, the conical converging tip of 10, in the nozzle casing 7 defining a converging cross-sectional area of a flow path of the feed liquid to increase a flow velocity of the feed liquid, are taught by Szamek (figure 1).

28. The additional elements of claim 48, further including a conical converging portion, the conical converging tip of 10, in the mixing liquid duct 4-7 including a cross-

sectional area of a flow path 4-7 of the mixing liquid to increase a flow velocity of the mixing liquid, are taught by Szamek (figure 1).

29. The additional elements of claim 49, further including valves in the chemical duct 34 (unnumbered valve in 34, figure 1) and connections 5, 6 which may be used to control the flow of the chemical by backpressure, are taught by Szamek (figure 1).

30. The additional elements of claim 50, including that a feed opening 10 for the mixture of chemical and mixing liquid is located inside a liquid duct 7 when the feed device has been secured to a flow duct 22, are taught by Szamek (figure 1).

31. The additional elements of claim 51, further including a feed opening 21 for mixture of chemical and mixing liquid located in a feed liquid feed opening 22, are taught by Szamek (figure 1).

32. With regard to claim 52, Szamek teaches a feeding device which may be used to introduce a chemical into a fluid flow comprising: a nozzle casing, one of (7-22, 22) having a hollow section defining a flow path for a feed liquid and a feed opening at an outlet, the outlet of 22, of the flow path; a mixing liquid duct, one of (3, 7-12) extending through the hollow section of the nozzle casing (7-22, 22) and having a mixing chamber, one of (10, 12) including at least one aperture to discharge a mixture of chemical and mixing liquid into the feed opening, wherein the mixing chamber is isolated from the feed liquid flow path, and a chemical feed duct, one of (34, 10) extending through the mixing liquid duct (3, 7-12) and having a chemical discharge port at the mixing chamber (10, 12), wherein the mixture of chemical and mixing liquid is formed in the mixing chamber (10, 12) of the mixing liquid and the chemical (figure 1).

33. The additional elements of claim 53, including that the nozzle casing 7-22 includ[es] a converging casing section, the converging portion of 7 between pipes 4 and 33, which forms a converging section of the flow path for the feed liquid, are taught by Szamek (figure 1).

34. The additional elements of claim 54, including that the mixing liquid duct 7-12 is coupled to the nozzle casing 2 by an adjustable support, the threading of 12-22 which adjusts a position of the at least one aperture with respect to the feed opening, are taught by Szamek (figure 1; 2:51-57).

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Janca whose telephone number is (571) 270-5550. The examiner can normally be reached on M-Th 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJJ

/DAVID L. SORKIN/
Primary Examiner, Art Unit 1797